

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P391606

Luminaire Tested: **24CZ2-70VHE-HRP-UNV-L930-CD1-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P391606  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-70VHE-HRP-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4882.4 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

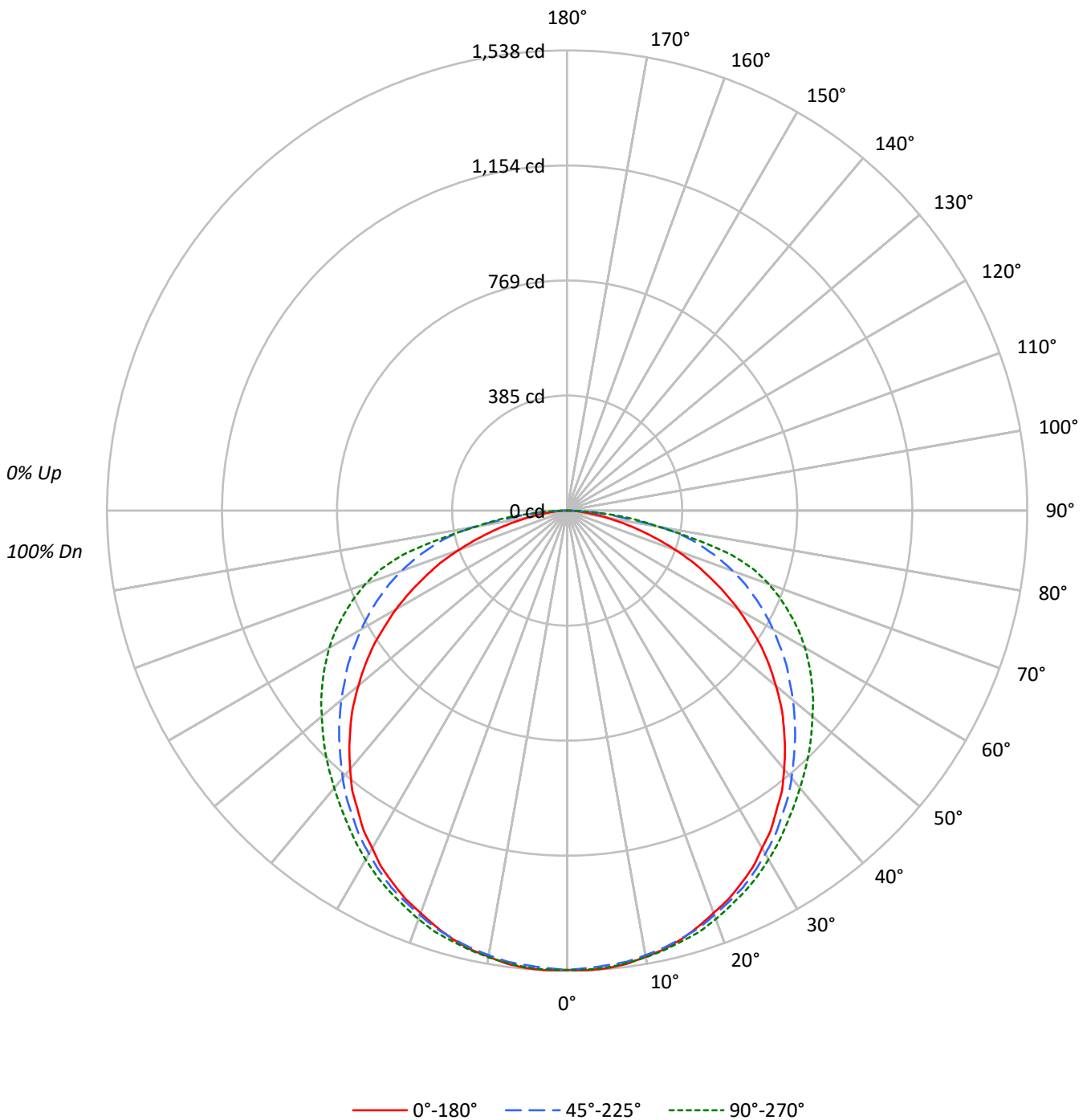
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2066	2066	2066
5°	2074	2061	2071
10°	2068	2061	2071
15°	2064	2061	2075
20°	2049	2060	2080
25°	2042	2064	2085
30°	2024	2058	2092
35°	2005	2053	2100
40°	1982	2050	2127
45°	1949	2051	2175
50°	1906	2063	2241
55°	1858	2096	2341
60°	1779	2137	2470
65°	1665	2213	2621
70°	1515	2315	2820
75°	1284	2442	2946
80°	1013	2458	2383
85°	747	1870	2093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.6	3.0
10°-20°	419.2	8.6
20°-30°	641.0	13.1
30°-40°	783.6	16.0
40°-50°	835.2	17.1
50°-60°	798.5	16.4
60°-70°	676.4	13.9
70°-80°	454.6	9.3
80°-90°	128.2	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1205.8	24.7
0°-40°	1989.4	40.7
0°-60°	3623.1	74.2
0°-90°	4882.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4882.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1535	1533	1526	1533	1533	146
15°	1482	1482	1480	1492	1489	418
25°	1376	1380	1390	1402	1405	634
35°	1221	1230	1250	1274	1279	765
45°	1024	1041	1078	1124	1143	790
55°	792	821	894	964	998	705
65°	523	576	695	787	823	519
75°	247	337	470	550	567	264
85°	48	99	121	131	136	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1537.8	1537.8	1530.5	1535.4	1535.4
5°	1535.4	1533.0	1525.7	1533.0	1533.0
7.5°	1528.1	1525.7	1520.8	1528.1	1525.7
10°	1513.6	1513.6	1508.7	1516.0	1516.0
12.5°	1501.5	1499.0	1496.6	1506.3	1503.9
15°	1482.1	1482.1	1479.7	1491.8	1489.4
17.5°	1457.9	1460.3	1462.7	1472.4	1474.8
20°	1431.2	1436.1	1438.5	1453.0	1453.0
22.5°	1407.0	1409.4	1414.3	1428.8	1428.8
25°	1375.5	1380.4	1390.1	1402.2	1404.6
27.5°	1344.1	1346.5	1358.6	1375.5	1378.0
30°	1302.9	1310.2	1324.7	1344.1	1346.5
32.5°	1266.6	1273.8	1290.8	1310.2	1315.0
35°	1220.6	1230.2	1249.6	1273.8	1278.7
37.5°	1179.4	1186.6	1210.9	1237.5	1244.8
40°	1128.5	1143.1	1167.3	1198.8	1210.9
42.5°	1077.7	1092.2	1121.3	1162.4	1177.0
45°	1024.4	1041.3	1077.7	1123.7	1143.1
47.5°	971.1	990.5	1031.7	1084.9	1106.7
50°	910.6	934.8	985.6	1046.2	1070.4
52.5°	852.4	881.5	937.2	1005.0	1036.5
55°	791.9	821.0	893.6	963.8	997.8
57.5°	724.1	762.8	842.8	922.7	959.0
60°	661.1	697.5	794.3	881.5	917.8
62.5°	593.3	641.8	745.9	837.9	874.2
65°	523.1	576.4	695.0	787.1	823.4
67.5°	460.1	518.2	644.2	736.2	772.5
70°	385.1	457.7	588.5	680.5	716.8
72.5°	314.8	394.7	530.4	620.0	653.9
75°	247.0	336.6	469.8	549.7	566.7
77.5°	184.1	278.5	406.9	440.8	428.6
80°	130.8	222.8	317.2	300.3	307.6
82.5°	84.8	169.5	196.2	222.8	230.1
85°	48.4	99.3	121.1	130.8	135.6
87.5°	21.8	36.3	48.4	48.4	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)